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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,956	08/17/2001	Jun Koyama	12732-071001	1626

26171 7590 11/15/2005

FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
SHENG, TOM V	

ART UNIT	PAPER NUMBER
2677	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/930,956	KOYAMA ET AL.	
	Examiner	Art Unit	
	Tom V. Sheng	2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-62* is/are pending in the application.

4a) Of the above claim(s) *54-61* is/are withdrawn from consideration.

5)☒ Claim(s) *50-53* is/are allowed.

6)☒ Claim(s) *1-49 and 62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/2/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 23-35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 21-32 of copending Application No. 09/931061, hereinafter case 061. Although the conflicting claims are not identical, they are not patentably distinct from each other because even though claims 23-35 of the current application are directed to liquid crystal display and claims 21-32 of the copending application are directed to electro-luminescent display,

the underlying pixel-memory structure (i.e. the nxm memory circuits, nxk non-volatile memory circuits, 2n memory circuit selecting units, 2n non-volatile memory circuit selecting unit) and

pixel-memory writing/reading structure (the source signal line, n writing gate signal lines, n reading gate signal lines, n writing transistors, n reading transistors,

connections from each gate electrode of the n writing transistors to one of the n writing gate signal lines, from each input electrode of the n writing transistors to the source signal line, from each output electrode of the n writing transistors to one of the m circuits out of the nxm memory circuits, from each output electrode of the n writing transistors to one of the k circuits out of the nxk non-volatile memory circuits, from each gate electrode of the n reading transistors to one of the n reading gate signal lines, from each input electrode of the n reading transistors to one of the m circuits out of the nxm memory circuits, from each input electrode of the n reading transistors to one of the k circuits out of the nxk non-volatile memory circuits,) are similarly claimed between the two claims. Claim 21 of case 061 differs from claim 23 of the current application in that claim 21 recites the pixel element comprising EL element and a corresponding EL drive transistor while claim 23 recites the pixel element as a liquid crystal element.

It would have been obvious for one of ordinary skill in the art at the time the invention was made that the pixel-memory structure and functionality are factually independent from the display type.

Claims 36-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 33-45 of copending Application No. 09/931061, hereinafter case 061. Although the conflicting claims are not identical, they are not patentably distinct from each other because even though claims 36-49 of the current application are directed to liquid crystal display and claims 33-45 of the copending application are directed to electro-luminescent display, just as analyzed above with regard to claims 23-35, the underlying pixel-memory

structure and pixel-memory writing/reading structure are similarly claimed. It would have been obvious for one of ordinary skill in the art at the time the invention was made that the pixel-memory structure and functionality are factually independent from the display type.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

3. Claims 1-22 and 62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As for claims 1, 12 and similarly of claim 62, it is unclear as to the limitation regarding a liquid crystal element electrically connected to one or a plurality of write transistors. According to fig. 1, 4 and 6, the liquid crystal element is actually electrically connected to each one of a plurality of (or the n) reading TFTs or read transistors. Claims 2-11 and 13-22 are dependent on claims 1 and 12, respectively. Please correct accordingly.

Allowable Subject Matter

4. Claims 50-53 are allowed.

5. Claims 1-22 and 62 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

6. The following is a statement of reasons for the indication of allowable subject matter: none of the prior arts of record teaches, inter alias, the limitations

"a plurality of read transistors, wherein each of the plurality of read transistors is electrically connected to a corresponding one of the plurality of first switches, and to a corresponding one of the plurality of second switches; a plurality of write transistors, wherein each of the plurality of write transistors is electrically connected to a corresponding one of the plurality of third switches, and to a corresponding one of the plurality of fourth switches" of claim 1;

"n read transistors, wherein each of the n read transistors is electrically connected to a corresponding one of the n first switches, and to a corresponding one of the n second switches; n write transistors, wherein each of the n write transistors is electrically connected to a corresponding one of the n third switches, and to a corresponding one of the n fourth switches" of claim 12;

"wherein the following (a) through (e) are available and one of the following (a) through (e) is selected and conducted in pixels in the row of the selected gate signal line out of the plural pixels:

(a) the n bit digital video signals inputted from the source signal line are written in memory circuits;

(b) the n bit digital video signals stored in the memory circuits are read;

(c) the n bit digital video signals inputted from the source signal line or the n bit digital video signals stored in the memory circuits are written in non-volatile memory circuits;

(d) the n bit digital video signals stored in the non-volatile memory circuits are read; and

(e) the n bit digital video signals stored in the non-volatile memory circuits are written in the memory circuits" of claim 50; and

"a read transistor electrically connected to the first switch and to the second switch; and a write transistor electrically connected to the third switch and to the fourth switch" of claim 62.

Response to Arguments

7. Applicant's arguments, see pages 17 and 18, filed 9/2/2005, with respect to claims 1-22 and 62 have been fully considered and are persuasive. The previous rejection of claims 1-22 and 62 has been withdrawn.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Sheng
November 7, 2005

AMR A. AWAD
PRIMARY EXAMINER